

REMARKS

Initially, Applicants gratefully acknowledge the indicated allowability of dependent claims 3 and 14. In view of the following remarks, however, Applicants submit their respective base claim is also allowable at this time.

In the Office Action, a new rejection of claims 1, 2, 4-13 and 15-22 was made under 35 U.S.C. §103(a) over SAKAMOTO et al. (US 6,396,229) in view of SUGIURA et al. (US 4,922,175) and LEE (US 6,283,252). Applicants respectfully traverse this new rejection in view of the following remarks. To the extent applicable, Applicants incorporate herein their previous comments concerning the SAKAMOTO et al. reference.

As recognized by the Examiner, SAKAMOTO discloses the estimation of a rotor position of a synchronous motor but does not disclose or suggest the estimation of a mobile body position, let alone the manner in which such an estimation would occur. These deficiencies in SAKAMOTO are not remedied by either SUGIURA or LEE.

The SUGIURA reference merely describes a device for accurately detecting the position of a mobile body based on a sine wave signal ($\sin A$, $\sin B$) from a position detector (1) as described and shown in Figure 1. As noted at col. 5, line 65 - col. 6, line 3, SUGIURA provides a rotary encoder as the position detector 1. Such a rotary encoder, which is commonly known, generates a repetitive signal such as a sine wave having a phase angle corresponding to a rotation angle of the motor. SUGIURA et al. thus attempts to obtain the position of the mobile body based on the sine wave signal, i.e., the phase angle of the

position detection signal. This operation is noted from the specification and drawings of SUGIURA. As such, the position θ_{su} , θ_{s1} , shows the rotational angle. In other words, SUGIURA describes a method or device to obtain the rotational angle from a signal corresponding to the rotational angle.

Clearly, therefore SUGIURA does not teach or suggest how to detect a pole position or to obtain the position of the mobile body from the magnetic pole position as recited in each of Applicants' independent claims.

Moreover, as noted from the above passage in SUGIURA, the motor itself – as the mobile body – is shown. However, a mobile body such as an elevator moved by a motor via a drive unit as in Applicants' invention is not taught or suggested in SUGIURA. In other words, Applicants' claimed "mobile body driven by a synchronous motor via a drive unit" recited in the independent claims is not taught or suggested in SUGIURA. Indeed, SUGIURA is vastly different from Applicants' invention, and does not disclose Applicants' claimed "rotor position estimator" or "mobile body position estimator". Hence, Applicants respectfully submit claims 1-18 are patentable over SAKAMOTO in view of SUGIURA.

Regarding the rejection of claims 19-22 based on the additional LEE reference, hereto Applicants respectfully submit such claims are patentable. LEE merely describes a leveling control device for an elevator, wherein the position of the elevator is detected. However, as shown in Figs. 1 and 6, the position of LEE's elevator is detected by a position detection unit (612) and not by the use of a magnetic pole position. In other words, LEE does not disclose or suggest either a "rotor position estimator" or a "mobile body position estimator".

In summary, as acknowledged by the Examiner, SAKAMOTO does not disclose or suggest a "mobile body position estimator". And, as noted above, neither SUGIURA nor LEE show either a mobile body position estimator or Applicants' claimed rotor position estimator.


In view of the foregoing, Applicants submit claims 1-22 are in condition for allowance. An early notice to that effect is solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #381NP/50449).

Respectfully submitted,

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